

Executive Summary

I. Introduction and basic information of the Survey

The purpose of the Third National Health Service Survey (NHSS) is to understand systematically the health status of urban and rural population, needs and demands for healthcare services, utilization of healthcare services and costs, the responsiveness of the health care system, and the opinions and assessment of health reform and development by different social players, so that evidences can be obtained to assist with policy making regarding health planning and health reform as well as the assessment of the policies.

The surveyed population of the Household Interview Health Survey was the permanent residents of the sampled households over the country. The sample households were selected using multi-stage, stratified random cluster sampling method. 95 counties (cities or districts) were sampled out in the whole country; from each selected county (city or district), 5 sample towns (streets) were taken. In all, 475 sample towns (streets) were selected. From each town (street), 2 villages (neighborhood committees) were selected as samples. Totally, 950 sample villages (neighborhood committees) were selected in the whole country. Then from each sample village (neighborhood committee), 60 sample households were randomly selected. Altogether 57,000 sample households were selected in the whole country.

The survey covered the following issues: the demographic and social characteristics of the household members, household financial status, housing, modification of water supply system and latrine in rural areas, health insurance of family members, sickness in the past two weeks, chronic diseases in the past 6 months, health behaviors and knowledge of the population of and above 15 years old, medical consultations in the past two weeks, reasons for not seeking medical care, self care, hospitalization in the past year, reasons for not being hospitalized when the patient should be, responses of patients to healthcare services, health care for married women of child-bearing age and children under 5 years old, etc.

In-house inquiry method was used in the Household Interview Health Survey for collecting data. After a preview of the sample households, the trained and certified surveyors went into the household and inquired each member of the household about the items listed in the survey form. There were field surveyors and survey supervisors. The surveyors were usually the local health care workers, responsible for in-house inquiry. The survey supervisors were the doctors from township hospitals or health facilities above that level, responsible for organizing, guiding, supervising and checking and accepting the work of inquiry.

Quality control was very much strengthened in each step of the Survey. The result of the Survey showed that the response rate of the surveyed adults themselves was 77.8%; the consistency rate of the results between the original survey and the

countercheck was 95%. The tests of data quality and their consistency showed that the Myer's Index was 3.32, indicating that the survey result had no preference for age. The result of Test of Goodness for Fit showed that the age distribution of the survey population was of no significant difference from that of the general population. Delta Dissimilarity Index and Gini Concentration Ratio indicated that the size of the surveyed households was consistent with that of the general households.

II. Results of the Household Health Survey

1. Basic information of the surveyed population

193,689 people of 57,023 households were actually surveyed in this project. The average size of a household was 3.4 people.

(1). The social characteristics of the population:

In the surveyed population, males accounted for 50.5% and females 49.5%. Age distribution is as follows: children under 5 accounted for 4.8% of the surveyed population; population of 5-14 years old 15.7%; population of 15-64 years old 70.0% and population above 65 years old 9.5%. Compared with the results of the two previous surveys, the population was gradually aging. Of the population of and above 15 years old, 18.8% were illiterate or semi-illiterate; 26.4% with primary school education; 34.2% with middle school education; 14.9% with high school education; 3.3% with 3-year college education and 2.4% with university or above education. Of the surveyed people, 9.7% were unemployed or semi-unemployed; 7.7% retired; 6.5% students; 60.6% farmers and 15.5% were workers of other types.

(2). Household economy:

It was found in the survey of the urban households that the annual income per capita of an urban household was 6565 yuan; annual expenditure per capita was 4934 yuan, of which 44.4% was spent on food, 10.4% on cultural and educational activities and 9.3% (459 yuan per capita per year) on health care. For the rural households, the annual net income per capita of a rural household was 2175yuan and the annual expenditure per capita was 1781 yuan, of which 37.0% was spent on food, 15.9% on cultural and educational activities and 12.9% (229 yuan per capita per year) on health care. Of all the surveyed households, 4.5% were poor households (urban 6.1% and rural 3.8%) and 30.0% (urban 25.0% and rural 33.4%) self-reported that their poverty was due to illnesses or injuries.

(3). Access to health services:

81.8% of the surveyed urban households were within 1 kilometer from any health

facility; 81.65% of those households were within 10 minutes' distance from any health facility. 61.1% of the surveyed rural households were within 1 kilometer from any health facility; 66.9% of those households were within 10 minutes' distance from any health facility. However 4.8% of the rural households were more than 5 kilometers away from the nearest health facility and this figure was up to 18% in rural areas of Class IV.

In urban areas, 30.4% of the population were covered by urban basic medical insurance; 4.0% by the government scheme; 4.6% by the labor insurance scheme; 5.6% by commercial medical insurance, and 44.8% were uninsured. In rural areas, Cooperative Medical System covered 9.5% of the surveyed population; 3.1% were covered by various types of social health insurances; 8.3% by commercial medical insurance and 79.1% were uninsured.

2. Health Status and Health Needs of the Residents

(1). Two week morbidity

1) Two week morbidity rate: The two week morbidity of the surveyed population was 143.0‰ with 153.2‰ for the urban population and 139.5‰ for the rural population. The survey was postponed from June to September-October because of the SARS outbreak. Compared with that of the 2nd National Health Survey in 1998, the prevalence rate for the urban population had decreased but that for the rural population was still increasing.

The top 5 disorders among the urban population by the two week morbidity rate in descending order were diseases of the circulatory system, respiratory system, digestive system, musculoskeletal system, endocrine system, nutrition and metabolism system. Among the rural population, also in descending order, they were respiratory disorders, digestive disorders, circulatory system disorders, disorders of the musculoskeletal system, and injuries and poisoning. Compared with that of the two previous Surveys, the prevalence rates of respiratory disorders, infectious diseases and skin/subcutaneous problems were decreasing whereas those of the circulatory system disorders, musculoskeletal system disorders and disorders of endocrine system, nutrition and metabolism were increasing.

In urban areas, the specific diseases of which the prevalence rates were ranking top in descending order were hypertension, acute upper respiratory infection, acute nasopharyngitis, acute and chronic gastroenteritis, cerebral vascular diseases, and diabetes mellitus. In rural areas, they were acute upper respiratory infection, acute nasopharyngitis, acute and chronic gastroenteritis, hypertension, influenza, and rheumatoid arthritis. In contrast to that in 1998, the prevalence rate of chronic non-communicable diseases was increasing among the urban population. For instance, the two week morbidity rate of hypertension increased by 41%; that of the cerebral

vascular diseases increased by 9%; that of diabetes mellitus increased by 64%. Among the rural population, the morbidity rate of hypertension increased by 131%.

2) Onset of two week morbidity : Of all the people who were sick in the past two weeks, 41.8% were with acute onset in the two weeks; 7.5% with onset of an acute illness before the two weeks but were still sick in the two weeks; 50.6% with chronic illness that went on into the two weeks. The proportion with chronic illness increased by 33.8% among the urban population and by 30.6% among the rural population compared with that in 1998.

3) Severity of sickness: The average days of sickness in two weeks per thousand of surveyed people were 1093 days (1238 days for the urban population and 1043 days for the rural population). The average bedridden rate of sick people in two weeks was 36.6% (33.7% for the urban population and 37.6% for the rural population). The average on-sick-leave rate of the sick people was 33.6% (15.5% for the urban population and 37.5% for the rural population). The number of sickness days, the number of days on sick leave and the on-sick-leave rate had decreased, and the bed occupancy rate due to sickness and the number of bed occupancy days significantly increased, compared with those in 1998.

(2). Chronic disease morbidity

The chronic disease morbidity rate among the surveyed population was 151.1‰ (239.6‰ for the urban population and 120.5‰ for the rural population). The specific chronic diseases ranked highest in morbidity, in descending order, were hypertension, diabetes mellitus, cerebral vascular diseases, ischemic heart disease and chronic gastroenteritis among the urban population, and hypertension, chronic gastroenteritis, rheumatoid arthritis and chronic obstructive pulmonary disease among the rural population.

(3). Physical and psychological health status of the population of and above 15 years old

73.0% of this population regarded their health as “good” or “very good” (68.6% for the urban population and 74.8% for the rural population); 5.2% regarded their health as “poor” or “very poor” (5.18% for the urban population and 5.19% for the rural population). 28.2% (30.6% for the urban population and 27.2% for the rural population) replied that they had difficulty or problems with one or several of the seven aspects including daily activities, job and housework, pain or discomfort, vision, mental status, memory, and sadness/worry/depression. 3.1% (3.4% for the urban population and 2.9% for the rural population) indicated that they had great difficulty or severe problems with one or several of the seven aspects. The proportion with health problems was larger in females than males and in aged people than young people.

III. The demands, utilizations and expenses of health services among residents

1. Clinic visits and treatments

(1) Treatments within two-week prior to the survey: Among surveyed persons having body discomfort within two-week prior to the survey, 51.1% of them would go to see the doctor, 35.7% would be self-treatment, and the remainder, 13.1%, would not take any treatment. Compared to the findings of the former two surveys, the rate of clinic visiting is decreased steadily for urban patients.

(2) Rate of clinic visiting in two-week: the rate of clinic visiting is 133.8‰ in surveyed areas, 118.1‰ in urban areas and 139.2‰ in rural areas. The rate for those covered by urban basic health insurance is 56.5% higher than that for those without any health insurance coverage; while in rural areas, the rates of clinic visiting for those covered or non-covered by health insurance systems are similar to the rates of morbidity. Compared with the former two surveys, the rates of clinic visiting decrease at different degrees in both urban and rural areas. In addition, the gap of rates of clinic visiting between populations with different income is widened now.

(3) Composition of health facilities: In urban area, 25.7% of patients selected primary health facilities for clinic visiting, 10.9% selected community health center, and 55.1% selected district-level and higher level hospitals. In rural area, 53.5% of patients selected village or private clinic, 25.8% selected township hospital, and other 13.6% selected hospitals of county-level and above. It's showed that the proportion of clinic visiting in primary health facilities is decreasing constantly, while the proportion visiting hospitals of county-level and above, especially in big hospitals, is increasing constantly.

(4) Non-clinic visiting: The survey findings indicated that the rate of non-clinic visiting is 48.9% with 57.0% in urban area and 45.8% in rural area. Compared with the survey findings of the former two health services surveys, the rate of non-clinic visiting shows increasing trend obviously.

In urban area, the rate of non-clinic visiting is 56.1% for those covered by urban basic health insurance and 62.5% for those not covered by any health insurance; while in rural areas, especially in underdeveloped areas, the rates of non-clinic visiting for those not covered by health insurance systems is obviously higher than those with health insurance systems (the former is 65.2% higher than later.)

(5) The reasons for non-clinic visiting: among those without taking any treatment measures, 40.5% feel it is not serious and unnecessary for clinic visiting, 38.2% could not afford to seek treatment due to financial difficulties, and 9.4% thought there are no effective measures. Compared with findings of the former two surveys, the rate of patients without taking any treatment measures increases, and the rate of non-treatment due to financial factors also increases.

2. Hospitalization

(1) The rates and reasons for hospitalization: The hospitalization rate in

surveyed areas is 3.6%, 4.2% in urban area and 3.4% in rural area. Compared with the former two surveys, the rate in urban area decreases while those in rural remains unchanged. However, the hospitalization rates between different income groups change obviously: the rate is decreasing among low-income group and increasing among high-income group, and the gap between high-income and low-income group is widened from 17% in 1993 to 68% in 2003. In urban area, the hospitalization rate is 5.38% for those covered by urban basic health insurance and 3.0% for those without covered by health insurance systems.

(2) Composing of hospital sites: In urban areas, the proportion of hospitalization is 67.9% in province- and city-level hospitals, 17.0% in district-level hospitals, and 5.1% in health centers. In rural areas, the proportion of hospitalization is 28.8% in township hospitals, 42.6% in county-level hospitals, and 14.1% in those above county-level hospitals. Compared with 1998, the proportion of hospitalization in district and higher level health facilities increased 10 percent in urban, and the proportion of hospitalization in township hospitals decreased 6 percent in rural areas.

(3) Hospitalization days and rate of operation: The average hospitalization days is 12.6 (18.1 in urban and 10.2 in rural). The average hospitalization days decrease both in urban and in rural, and more obvious in urban. The rate of operation is 31.4% (33.0% in urban and 30.8% in rural) among inpatients. Compared with 1998, the rate of operation increases by 7 percent.

(4) Reasons for patients discharged from hospital: Among those discharged from hospital, 46.1% is recovery and discharged with doctor's content, 7.4% haven't recovery yet discharged by doctor, and other 43.3% discharged from hospital on their own demands. For those leaving hospital on their own demands, 63.9% were due to financial difficulties with 53.0% for urban and 67.3% for rural areas respectively.

(5) Fail to hospitalize although hospitalization was suggested by a doctor: The rate of failing to hospitalize although hospitalization was suggested by a doctor is 29.6% (27.8% in urban, 30.3% in rural). The rate is 15% higher among those not covered by urban basic health insurance than those covered by health insurance systems in urban areas; and the rate is 8% higher among those without health insurance than those covered by health insurance systems in rural areas. Compared with the former two national health services surveys, the general situation hasn't changed in urban areas and the rate decreased in rural areas.

The main reasons for non-hospitalization are: 19.5% of patients believed hospitalization was not necessary, 4.1% haven't enough time, 70.0% caused by financial difficulties, and 6.4% caused by other reasons. The reason of economic difficulties contributes to 56.1% in urban and 75.4% in rural areas. Compared to 1998, the rate of reason caused by economic difficulties decreased in urban and increased in rural.

3. Medical services expenses of residents

(1) Expenses for outpatient: The average expenses for outpatient is 120 Yuan per time (median is 33 Yuan) in surveyed areas, in it, it is 219 Yuan in urban (median

is 90 Yuan) and 91 Yuan (median is 25 Yuan) in rural areas. Besides outpatient medical expenses, the residents also need to spend other expenses (such as for the traffic), and the indirect expenses is 8 Yuan, in it, it is 9 Yuan in urban and 8 Yuan in rural areas.

Deducting the factor of inflation, the outpatient medical expenses increased by 1.2 times than 1993 and increased by 87.5% than 1998. Compared with 1993, it increased by 1.5 times and 1.3 times for urban and rural areas respectively. Compared with 1998, it increased by 85% and 100% for urban and rural areas respectively.

(2) Expenses for inpatient: The average expenses for inpatient is 4123 Yuan per time (median is 1600 Yuan) in surveyed areas, among it, it is 7606 Yuan in urban (median is 3375 Yuan) and 2649 Yuan (median is 1100 Yuan) in rural areas. The average indirect expenses for each hospitalization (mainly including traffic, accompany etc.) is 360 Yuan, among it, it is 514 Yuan in urban and 294 Yuan in rural areas.

Deducting the factor of inflation, the inpatient medical expenses increased by 1.5 times than 1993 and increased by 67.2% than 1998 totally. Compared with 1993, it increased by 1.6 times and 1.7 times for urban and rural areas respectively. Compared with 1998, it increased by 77% and 74% for urban and rural areas respectively.

(3) Expenses for drugstore purchase and self-treatment: The expenses for self-treatment and purchase drugs from drugstore are also surveyed. The total expenses in two-week prior to the survey are 72 Yuan (urban is 112 Yuan, rural is 50 Yuan). Compared with 1998, the expenses increased by 20% every year in average, which is higher than the increase rate of outpatient and inpatient medical expenses in the same period.

4. The responsiveness of health system and the satisfaction of residents

The 57.1% of outpatients (48.4% in urban and 59.8% in rural) are satisfied with health facilities. When it comes to the most dissatisfied aspect of the health services, 20.9% (31.9% in urban, 17.6% in rural) selected high medical expenses, 7.4% (3.6% in urban, 8.6% in rural) selected poor hospital environment and medical equipment, and 3.7% (3.1% in urban, 3.9% in rural) dissatisfied with poor hospital technique.

The 44.3% of inpatients (39.8% in urban and 46.3% in rural) are satisfied with the hospital. When it comes to the most dissatisfied aspect of the health services, 33.2% (38.2% in urban, 31.1% in rural) selected high medical expenses, 6.5% (4.9% in urban, 7.2% in rural) selected poor hospital environment and medical equipment, and 3.2% (3.8% in urban, 2.9% in rural) dissatisfied with poor medical services and manner of service delivery.

5. Main health-related behaviors

(1) Smoking rate and smoking severity: Among surveyed population aged 15

years old and above, the current smoking prevalence rate is 26.0% (23.9% in urban and 26.8% in rural) with 48.9% for men and 3.2% for women. The smoking rate in urban area is lower than that in rural for men, while it is higher than in rural for women. Over the past 10 years, the smoking rate among residents aged 15 years and above decreases obviously.

Each smoker smoked 15.9 cigarettes (in urban it is 14.9, and in rural it is 16.2) per day in average with 16 cigarettes for men and 12 for women. It is remarkable that the smoking rate is decreasing among population, while the quantity of smoking is increasing among smoker and the severity is also increased.

(2). Alcohol: Among those aged 15 years old and above, 79.5% (urban 80.0% and rural 79.3%) never drink or seldom drink alcohol; 12.3% drink alcohol occasionally (urban 12.9 and rural 12.1%); 8.2% (urban 7.1%, and rural 8.8%) drink alcohol frequently. The rate of drinking alcohol frequently for men (15.29%) is obviously higher than that of women (1.07%), and the rate for men in urban (13.45%) is lower than that in rural (15.97%) while the rate difference between urban and rural is not obvious for women. The rate of drinking alcohol frequently for those aged 45-55 years old is the highest, and the rates increase with age for those aged 15-44 years old and decrease with age for those aged above 55 years and older.

(3). Physical exercise: Among surveyed population aged 15 years old and above, 14.8% of them (urban is 36.3%, rural is 6.4%) do physical exercise frequently in spare time. 10.4% of the surveyed residents do physical exercise such as jog, slow racing, and Taiji, and 2.2% play ball. Each exerciser play 5.3 times (urban is 5.5, rural is 4.8) per week averagely, and each time spend about 50 minutes (urban is 57 minutes, rural is 33 minutes).

6.Immunization and Disease control

(1). Expanded Programme of Immunization (EPI)

According to the parents' answers in surveyed areas, 89% of their children have immunization cards with 94.7% for the children in urban areas and 87.3% in rural areas, and the rate is relatively lower in the 4th-class rural areas, only 82.2%. Compared with 1993, the proportion of parents answering children having programmed immunization cards have greatly increased, especially in the rural area. But compared with 1998, in urban areas and in rural areas the proportion is reducing in various degrees, in urban areas it reduced by 3 percent in average, and reduced by 5.5 percent in rural areas.

The performance of children's EPI has been checked up through reviewing EPI cards, inquiring parents and examining the scars of inoculation on children's body. In surveyed areas, the inoculating rate of BCG vaccine is 95.9% (97.7% in urban areas, 95.4% in rural areas), the inoculating rate of whooping cough-diphtheria-tetanus vaccine is 88.4% (93.3% in urban areas, 87.0% in rural areas), the inoculating rate of poliomyelitis vaccine is 89.8% (93.9% in urban areas, 88.6% in rural areas), the inoculating rate of measles vaccine is 94.3% (96.7% in urban areas, 93.7% in rural areas), the inoculating rate of hepatitis B vaccine is 80.2% (93.0% in urban areas,

76.7% in rural areas).

(2). Drinking water systems and improving rural water supply

The proportion of urban residents drinking piped water is overwhelming with 96% of the surveyed households. Compared with the results in 1998, the popularization rate of piped water has raised by 2 percent. In rural areas, the proportion of drinking piped water is 34%, that of drinking water fetched from wells is 34%, that of drinking water depurated by some primary ways (such as heightening well sides, adding well cover, and putting in disinfectant periodically) is 8.8%, that of drinking collected rainwater is 3.4%, and that of drinking unhygienic water (such as the water of rivers, streams, lakes, ponds, irrigation canals and ditches) is 19.8%. The better the economic condition of an area is, the higher the popularization degree of piped water and improved water supply is; the poorer an area is, the higher the proportion of drinking unhygienic water is. For example, the rate of drinking unsanitary water is up to 50.3% in the fourth-class rural areas. Compared with the findings of the former two surveys, in the rural area there is significant progress in changing water work. The proportion of popularization with access to piped water in rural areas has risen from 22% in 1993 to 26% in 1998 and to 34% in 2003. In the meanwhile, the rate of drinking water fetched from wells has risen from 28% in 1993 to 31% in 1998 and to 34% in 2003.

(3). Household's latrine types and improving rural sanitary latrines

In urban areas, the proportion of household with complete water-flushing sanitary latrine is up to 79%. The proportion of other four non-flush types of lavatories, which are seldom seen in urban areas, and mainly in the suburbs, is fewer than 8%. But in the cities, 13.4% of the households have no lavatories, or use the lavatories under sanitation standards (such as close stool etc.). Compared with the former two surveys, the proportion of the households with complete water-flushing sanitary latrines in the cities has obviously increased, and the proportion of the household with no lavatories or use under sanitation standard lavatories is reducing constantly. In rural areas, though the improving sanitary latrines work makes progress in some degree, it remains a very important problem, and by 2003, the proportion of the household with no lavatory or use lavatory under sanitation standards has still reached 79.2%, the household with complete water-flushing sanitary latrine or other improved lavatory is 21.8%. In general, the task of improving rural sanitary latrines is still very arduous, especially in the under-developed rural areas.

(4). Health education and its channels

Among those aged 15 and above, 47.2% of them can actively obtain the health care knowledge (67.5% in urban areas, 39.5% in rural areas). The proportion of the male (48.9%) is slightly higher than that of the female (45.6%), and the gender differences are not distinct between urban and rural areas. The proportion of the male (41.9%) is obviously higher than that of the female (37.0%) in rural areas. 71.6% of those aged 15 years and above regard TV as one of the main ways to obtain health care knowledge, and 27.3% answer the newspapers and periodicals as one of the main sources, the tertiary is from the doctors, 25.9%. It is different to some extent

according to the main ways to obtain main health knowledge between the urban and rural residents: TV (82.58%), books and periodicals (55.44%), broadcast (22.82%) are the main channels of the top three in urban areas; And in the rural area they are TV (67.20%), doctors (28.28%), books and periodicals (16.15%) respectively.

(5). The awareness of prevention and treatment knowledge about AIDS

Among people surveyed aged 15 and above, 62.3% know that HIV/AIDS is transmitted by blood (80.0% in urban areas, 52.4% in rural areas), and 64.1% know it is transmitted by sex (80.7% in urban areas, 54.8% in rural areas), and 37.6% know vertical transmission from mother to child (53.4% in urban areas, 28.8% in rural areas). 23.9% (9.7% in urban areas, 31.8% in rural areas) of the residents know the correct answer of HIV/AIDS transmission while 1.9% gave wrong answers (1.6% in urban areas, 2.1% in rural areas).

(6). Prevention and treatment of Tuberculosis

Residents investigated who have suffered from cough for 3 weeks and the above in succession account for 1.7% (1.8% in urban areas, 1.6% in rural areas); hereinto 14.9% of the persons investigated take the situation of the blood among phlegm or hemoptysis. Among those coughed for 3 weeks and the above in succession, the proportion of clinic visiting is 62.5%. For those who have gone to the hospital to make phlegm examination or X-rays, 22.6% is diagnosed as the tuberculosis (12.4% in urban areas, 28.0% in rural areas). Calculated according to the number of tuberculosis patients that find out during clinic visiting, the tuberculosis prevalence rate is 115.6 per ten thousand among investigated population with 84.5 per ten thousand in urban areas, and 126.4 per ten thousand in rural areas.

(7).Maternal and child health care

1). Maternity check-up

During the year prior to the survey, 34.5% of the investigated women have done the maternity check-up (not including disease treatment and pregnant and perinatal period health care), 48.9% in urban areas, and 29.8% in rural areas. Compared with 1993, the proportion of maternity check-up has raised significantly, especially in rural areas.

2) Maternal health care

The proportion of pregnant women who accepted antenatal check-up once and the above is 87.8%, 96.4% in urban areas, and 85.6% in rural areas. In urban areas, the proportion of maternity women is 58.1% whose first antenatal check-up is within two weeks of pregnancy period, 69.9% in urban areas, 54.7% in rural areas. The antenatal check-up rate decreases along with the regional economy level falling. Over the past ten years, the antenatal check-up rate of maternity women in urban areas and rural areas has the increasing trend, and especially in the rural areas there are greater changes.

The proportion of women who accepted one and the above check-up or postpartum visiting is 53.3%, 59.6% in urban areas (65.0% in big city, 62.8% in medium city, and 52.9% in small city), 51.7% in rural areas (66.5% in the 1st class rural areas, 52.7% in the 2nd class rural areas, 50.4% in the 3rd class rural areas, and

36.9% in the 4th class rural areas). Compared with 1993, the postpartum visiting rates obviously increase; Compared with 1998, in urban areas and the 2nd class rural areas the postpartum visiting rates decline in various degree, in the 1st, 3rd and 4th class rural areas the postpartum visiting rates have raised, especially in the 4th class rural areas the rate raises most, up to 39.2%.

3). The places of delivery and the reasons of delivery at home

In urban areas the rate of delivery in hospital is 92.6% (53.3% in general hospital, 31.9% in maternal and child health care center, 7.5% in the community or township hospital); in rural areas the rate of delivery in hospital is 62.0% (24.5% in hospital, 10.2% in maternal and child health center, 27.3% in township hospitals).

4.2% of maternity women deliver at home in urban areas, most of them live in the small cities, and the main reasons of delivering at home are: have no sufficient time to go to health institutions, do not see the necessity to go to hospital, and some have financial difficulties; 33.9% of the maternity women deliver at home in rural areas, the main reasons are: do not see the necessity to go to hospital, financial difficulties, lack of sufficient time to go to health institutions, and traffic inconvenience. Compared with findings of 1998 investigation, the proportion of maternity woman choosing to deliver at home due to financial difficulties has the obviously growing tendency, and the proportion of maternity woman by traffic inconvenient that deliver at home has the tendency to reduce obviously.

4). Birth weight

The infant's average birth weight of different survey areas is 3.3 kilograms, and the infant's birth weight in the rural areas is very close to that in urban areas. The proportion of the low birth weight infants in urban areas is 3.1% on average, and in rural areas is 3.8% on average. The proportion of the low birth weight infants reduces with the improvement of the economic development.

5). Breast feeding

21.5% of the infants was breast fed for the first time within half an hour post-born, 46.3% within 24 hours after half an hour, and 29.8% of them was breast fed 24 hours later, the rate in the rural areas is roughly the same as that in urban areas. But the proportion of the infant without breast feeding is higher in urban areas, 5.9% of the urban babies and 1.5% in rural areas haven't been breast fed. In urban areas the average breast-feeding time is 5.7 months with one month longer in rural areas than in urban areas. The duration of breast-feeding in rural areas seems to relate to economic level, the duration of breast-feeding is longer in the regional with poorer economic condition. The time of adding the supplement food for babies, in urban areas is after 5th month while in rural areas is on 6th month after birth.

III. The major findings of this survey

1. Residents' demand for health services in rural and urban areas maintained a sustained increase. The burden of disease becomes increasing heavily, posing creating new challenges for socio-economic development.

The size and composition of the population, socio-economic structure and the composition of disease profiles are the most essential factors influencing resident's demand for health services. In the past period of time, the changes in the size and composition of population, as well in the socio-economy and culture has changed markedly. With the further development of China's social economy, the increasingly great and changing of rural and urban health service demand will possibly bring great pressure to China's health service delivery.

(1)The rapid population growth and increasing and ageing population as well as urbanization have brought more demand for health services. In the past 10 years, China's population increased by 110 million, the ratio of the population over 65 years of age increased from 5.6% to 7.5%. Estimated from the current two week disease prevalence rate, the change in population alone has resulted in the 420 million more disease incidents. The two week disease prevalence of aged people over 65 years of age was 33.8%, three times of those under 65 years of age, and shows a trend of continued increase. It was found in this survey that there was an obvious trend of increase of disease prevalence rate with the urbanization, income and education. The rate in urban areas is distinctly higher than that in rural areas, well-off rural areas distinctly higher than that in poverty-stricken areas. The two week morbidity rate of the high-income urban groups is 32% higher than that of the low-income groups. Researches in and out of China have demonstrated that with the development of the socio-economy and the improved education of the population, people's health consciousness will keep increasing, so will their demand for health products. According to predictions, China's population will reach 1.41 billion, with the aged population over 65 years of age reaching 133 million and the percentage of the urban population will be over 40%. The disease incidences in China will be over 5.5 billion even without taking into account of if the changes in socio-economy and in prevalence of different age groups.

(2) Chronicle non-communicable diseases have become major diseases in urban residents, yet the prevention and control of major infectious diseases shall not be ignored. According to the survey, the dominating disease profile of urban residents has showed an obvious change. In regards of judged by composition of the disease prevalence, the first five leading diseases are the diseases in the circulation system, the respiratory system, the digestion system, the muscular and skeletal action system, and endocrine and nutrition metabolism related diseases. Compared with the previous two surveys, the incidence of diseases in the respiratory system and the digestive system, infectious diseases and skin diseases is on an evident decrease, while the diseases in the circulation system, in the muscular and skeletal system and the endocrine and nutrition metabolism diseases are on the increase. The diseases in the circulation system ranks has become the first disease group, among which hypertension, diabetes and cerebra vascular diseases have become a common diseases with a high incidence among the urban residents. There will be a higher incidence of chronicle diseases with the higher living standards of urban residents and the even

faster ageing process. The results of the survey demonstrate that for every 10 years of increasing in age, the chronicle disease prevalence increases by over 50%. Currently the urbanization is stepping up; rural workers frequently migrate to cities, increasing the potential risk in the transmission of serious infectious diseases such as SARS. China's migrating population whose average time of migration is over 6 months exceeds 127 million, increasing by 5 million per year. "Peasant workers" have become a particular marginalized group in cities, making great contribution to the urban development, bringing at the same time unavoidable socio-economic and health problems. They do intensive labor for a low income in substandard working environment and living conditions, the lack of occupational safety, food health and health knowledge make them a group with high incidence of infectious diseases.

(3)The rural residents are faced with the dual burden of infectious diseases and chronicle diseases. The result of the survey shows that in the past decade, the infectious disease incidence in the rural areas decreased from 5.7% to 2.7%. The common diseases are mainly infectious diseases, such as the diseases in the respiratory, digestive and urinary systems. The incidence of such diseases is high and shows no or no obvious trend of decrease compared with the previous two surveys. Infectious diseases are closely associated with living environment, sanitary conditions and life styles. The survey demonstrates that improvements have been made in the housing area of the rural residents, while no obvious progress was showed in drinking water, sanitation and water closet toilets. In particular no marked progress was made in toilet improvement. Meanwhile, the prevalence of some chronicle diseases such as those in the circulation system and in the muscular and skeletal system increased distinctly in the rural areas. For example, the prevalence of hypertension increased by 4.3 times compared with 1993. In a certain period the rural areas is faced with the dual threats of infectious diseases and chronicle diseases.

2. The rural and urban residents' demand for and utilization of medical and health service show an obvious trend of decrease. There is a transfer in effective demand.

In the past decade, the urban and rural residents' utilization of medical and health services shows a distinct trend of sustained decrease since 1993. The decrease margin became bigger in the recent 5 years. The utilization rate in the rural areas showed an increase in the first 5 years, yet decreased by a large margin in the later 5 years. This survey found that the two week medical service seeking rate was 13.4% (urban 11.8%, rural 13.9%), a decrease of 16.5% (urban 19.5%, rural 15.4%).

Residents' utilization of medical institutions decreased, the effective demand transferred. Many residents do not seek treatment in hospitals after getting sick, but rather buy medicine in pharmacies and treat themselves. It is demonstrated in this survey that 36% of the patients nationwide adopted self-treatment. The percentage of self-treatment increased year by year: from 23% in 1998 to 31% in rural areas,

from 44% to 47% in urban areas. The main causes for these changes are:

(1). Low coverage of medical security. Medical security system is an effective way to protect residents' health against the risk of diseases and improve residents' health service. The survey shows evident difference in the utilization of health service between the group who have and the group who don't have medical insurance. For example, the utilization of outpatient and that of inpatient treatment by urban residents who are covered by medical insurance was 13.4% and 5.8% respectively, while those of the residents who are not covered were 8.6% and 3.0% respectively. This survey shows a low coverage of medical security in China: the number of urban residents who have any sort of medical insurance accounted for 49.6% of the total being surveyed (among which the percentage of urban employees with basic medical health insurance is 30.2%, medical treatment covered by the government 4.0%, covered by labor medical insurance 4.6%, coverage by other insurances such as insurance for catastrophic diseases 2.0%), i.e. 50.4% of urban residents do not have medical insurance of any sort. Compared with the survey in 1993, about 23% of the population dropped out of various medical insurances, most of whom are families of worker with labor medical insurance, the population that have quitted job, been laid off or unemployed. In rural areas, the percentage of residents with medical security is only 12.6% of the population being surveyed, 9.5% of whom are covered by the cooperative medical system. Given that over 50% of urban population and over 80% of rural population do not have any medical security, the utilization of health service by the general public is necessarily suppressed.

(2). The medical expenditure increases too fast. In the past decade, the "expensiveness of medical treatment" has become a topic concerned by the general public. This survey shows that the increase rate of medical service cost exceeds that of per capita income, and medical and health expenses have become the third largest family expense after food and education. In the past five years, the annual income of urban residents rose by 8.9%, rural 2.4%, while the medical expenses in urban and rural areas rose by 13.5% and 11.8% respectively. In 2003, the average cost for every medical treatment of urban residents was 163.5 yuan, for every hospitalization 5518 yuan, both increasing by 37% from 1998. The average cost for every medical treatment of rural residents was 78.4 yuan, hospitalization 2236 yuan, increasing by 75% and 46% respectively. The average cost for one hospitalization is equivalent to the annual income of a rural or urban resident. In other words, getting hospitalized once costs the income for the whole year. It can also be learned from the survey that most of the deserved hospitalizations that have been abandoned were due to the heavy economic burden. The excessive medical cost has become a main restraint for residents to utilized outpatient and inpatient medical services. If the upward trend for medical cost is not turned, even heavier burdens will be brought to the society and families, and residents' effective demand for health services will be even more suppressed.

(3). The low-income groups and residents living in remote rural areas lack access have low accessibility to health services. “Expensive medical treatment” exerts more severe impacts on urban and rural low-income groups. Most of them (nearly 80%) do not have medical security, to say nothing of money to afford the increasingly high medical costs. “Do nothing about diseases and wait to die when they get serious” has become their way of life. It is found in the survey that 41% of low-income rural and urban population did not seek hospitalization when they should, far higher than average income population. In part of the rural areas, in particular the remote rural areas, inadequate health resources make it difficult for residents to get medical treatment. For example, in four categories of rural areas, 18% of the households are over 5 kilometers away from the nearest medical institutions, 1/4 of the households are over 30 minutes away to the nearest medical institutions, over 10% of the residents who have utilized health services expressed dissatisfaction with the equipment, environment and technical capacity of the outpatient and inpatient medical services that they have utilized. The medical conditions and technical capacity in remote rural areas can not meet the health service demand of the local residents. The poor accessibility of health services severely restrains health service utilization by low-income groups and remote rural residents.

(4). With more health knowledge and more value for time, many residents prefer to treat themselves. With better living standards and education, people are more interested in the gaining of health knowledge and ways to prevent and treat diseases. Many residents can treat some ordinary diseases themselves. The phenomenon of long waiting time and short consultation time has practically not been changed, so the busy people have to think about the time and cost for medical treatment. Therefore, when it comes to whether to seek and what kind of medical treatment to seek, some residents will weigh on the seriousness of their disease and time to treat it. They will treat themselves to save time if they don't think their disease serious. The survey in 2003 shows that 40% of the untreated patients did not think their disease serious, 35.7% of the patients adopted self-treatment. Although it is practicable to buy medicine in the pharmacist's or use other alternative treatment to treat some common diseases, risks such as treatment delay and abuse of medicine do exist.

3. The health situation in rural and urban areas has been improved, but the task is still daunting.

(1). Residents' health knowledge is gradually increased and healthy behaviors are promoted. With the improvement in the material and cultural standards, healthy life and health in life have become an issue of interest. Especially in some areas especially in cities, changing unhealthy habits and taking part in physical activities and sports have become very popular custom. In the survey on people over 15 years of age, nearly half of the people actively obtain healthcare knowledge, and the percentage of cities is 67%. Television is the first main channel for rural and urban residents to get health knowledge. Newspapers and books are other main channels. Besides many urban residents gain health knowledge from the radio, while many in

rural areas get it from medical doctors. The command for health knowledge is also higher and higher. Among the people over 15 years of age being surveyed, 90.0% in urban areas and 62.5% in rural areas know that AIDS is a serious communicable disease. In the past decade, residents' life style way of life and behaviors have changed markedly, smoking and alcohol drinking rates among the population over 15 years of age continues to decrease. The smoking prevalence rate among males dropped from 59.3% to 48.8%, female from 5.0% to 3.2%. The rate of frequent alcohol drinking among males decreased from 33.8% to 15.2%, female from 3.1% to 1.1%. In 2003, 14.7% of the people often actively engaged in physical activities (urban 36.2%, rural 6.4%), two times higher than in 1998. 47.0% of residents over 15 years of age could actively access health knowledge (urban 67.2%, rural 39.2%). The three main channels for residents to gain health knowledge are television, reading newspaper and books, and the radio in urban areas; television, consulting medical doctors and reading newspapers and books in rural areas.

(2). Distinct progress has been made in maternal and child health care. Marked achievements have been made in the measures adopted to follow up the two guidelines. Large improvements have been made on the indicators in the prevention and treatment of gynecological diseases and in maternal health care. Among the nearly 40,000 women from 15-49 years of age, 35.0% of the married women had taken gynecological examinations in the previous year (urban 49.5%, rural 30.2%). Compared with the 1993 survey result of 24.5% (urban 47.7%, rural 16.4%), the percentage of gynecological examinations especially in the rural areas have risen distinctly. In the surveyed areas, the perinatal examination rate is 87.8% (urban 96.4%, rural 85.6%). Compared with the surveys in 1993 and 1998, pre partum maternal examination rate increased markedly. The nationwide rate of post partum follow-up visits reached 53.3%, slightly higher than 1993 (46.0%) and 1998 (52.1%). Among the surveyed women who had delivered children, the rate of hospitalized delivery was 68.3% (urban 92.6%, rural 62.0%), distinctly increased in rural areas compared with 1993(21.7%) and 1998. Maternal mortality rate and child mortality rate show a new trend of decrease after stable for almost 10 years. However, many problems still exist in maternal and child health care. For example, compared with 1998, the post partum follow-up visit rate decrease in both urban areas and in the first and second categories of rural areas; the percentage of home delivery in rural areas is still as high as 33.9% (the main reasons are: 39.9% considered it unnecessary to go to the hospital, 21.0% found it too late to go to the hospital, 28.6% did not have enough money for it, 5.6% had no convenient transport for it); of the home deliveries, 25.0% in urban and 41.6% in rural areas were assisted by non-professional midwives.

(3). Improvements have been made in safe water and sanitary toilet projects, safe drinking water in the rural areas is still a major serious issue. Patriotic health campaign has been strengthened; new progress has been made in safe water and sanitary toilet projects. The utilization rate of running water in urban areas reaches 96%, 2 percentage points higher than 1998. Water utilization for daily life in rural

areas reached 34%, hand press machine well 34%, well with covers and regular disinfection medicine 9%, the three altogether 77%. Compared the 1998 survey, running water popularization increased by 7.5 percentage points, hand pressed machine well, 4 percentage points. But the more poor the area is, the higher percentage of households with unsafe drinking water (no heightened well sills, low standards of well cover, regular disinfection and rain water collection) is, 20.9% in the third category of rural areas, 50.35% in the fourth category. Meanwhile, marked improvement has been made in sanitary toilet renovation in rural and urban areas. Compared with 1998, water closet in urban areas increased from 65% to 79%. The sanitary toilet improvement rate (water closet, separate collection of stool and urine, etc.) is as high as 30%. Nevertheless, it should be seen that the percentage of un-sanitary lavatories such as dry lavatories and deep pit is still high, and households without a lavatory in economically backward areas still accounts for 15%.

(4). EPI coverage for children maintains at a high level, but basic work has been weakened in recent years. Generally speaking, the coverage of expanded program on immunization still maintains a high level in rural and urban areas. In this survey, EPI recording cards or manuals were examined on the spot, card holding rate for children's EPI is 88.8%(urban 94.7%, rural 87.3%), a slight decrease compared with the 1998 survey result of 91.8%. Meanwhile, the EPI inoculation was inquired in detail. The result of the survey shows: BCG inoculation rate is 95.9% (urban 97.7%, rural 95.4%), the inoculating rate of whooping cough-diphtheria-tetanus vaccine 88.4% (urban 93.3%, rural 87.0%), poliomyelitis vaccine inoculation rate 89.8% (urban 93.9%, rural 88.6%), measles 94.3% (urban 96.7%, rural 93.7%), hepatitis B 80.2% (urban 93.0%, rural 76.7%). Public health is not done well enough in rural areas especially in poverty-stricken areas. In the third category of rural areas, the EPI card holding rate was only 83.2%, the fourth category of rural areas, only 82.2 %

(5). There is still a high tuberculosis prevalence rate in some areas, prevention and control measures should be strengthened. The survey showed that the estimated TB prevalence rate in the surveyed areas is 153.4/100,000 (urban 115.5/100,000, rural 166.2/100,000), where 96.4% of the TB patients received treatment. But only 61.1%(urban 73.7%, rural 58.4%) of the patients on medicine are supervised when taking medicine. 82.1% of the urban supervisors are family members, the next is hospital doctors 14.3%, while in rural areas they are mainly family members (62.7%), village doctors (15.7%) and hospital doctors (13.7%).

4. There is distinct difference between rural and urban residents in the utilization of health services and the gap among different population group is increasing. .

(1) There is distinct difference between rural and urban residents in the utilization of health services. China's dual economic structure is reflected in the enormous difference in the health status, burden of disease and utilization of health services.

The three health service surveys show that demand for and utilization of health services in urban areas are obviously higher than that in rural areas. In recent years, the difference in the utilization of health services between urban and rural areas is narrowing down. For example, the two week medical consultation rate of urban and rural residents were 19.9% and 16.0% respectively in 1993, 11.8% and 13.9% in 2003, annual hospitalization rate 5.0% and 3.1% in 1993, 4.2% and 3.4% in 2003. This is actually attributable to the decreasing utilization of outpatient and inpatient service in urban areas. From the perspective of economic burden brought by utilizing health services, medical and health expenditure by urban and rural residents account for 9.3% and 12.9% respectively of their total health expenditure, much higher in rural areas than in urban areas. As farmers lack medical insurance, economic status remains the main reason affecting their use of health services. In spite of the rural health reforms in recent years and the increased coverage of rural cooperative medical services, it can be found from the survey that there need some time before the farmers eventually benefit from rural health reform and policies.

(2). The gap of health service utilization among different urban and rural residential population is enlarging. We divided the sample into five sub group according to income level and found out that there was significant difference in health service utilization among different group. The out-patient and hospital un-admission rate decreased with the increase of income level. Over the last decade, the gap of health service utilization rate among different income groups was not narrowed but enlarged dramatically in both urban and rural areas. The outpatient and hospital un-admission rate increased gradually from 1993 to 2003 with the highest rate and increase in the low income group. Low health service utilization rate was mainly attributed to the low income group. There is clear trend that the gap of health service utilization between high and low income groups will further enlarge. The low income group suffers from heavier disease burden and lower health insurance coverage. The health insurance un-coverage rate is as high as 75% in urban low income population in 2003.

(3). Health status in poor areas and of low income group and venerable population is challenging. Analyst of health service needs and utilization in different geographical area and income group shows the variations between urban and rural areas, among different rural areas and different income group in the same geographical area. People in the poor areas, low income group and venerable population enjoy lower level of both medical and public health services. For example, the unsafe drinking water usage rate is as high as 50.3% in poor rural residences; unhygienic lavatory coverage is as high as 91.3% with 7.8% for the better-off and 7.8% for the poorest areas. EPI coverage rate of the children raises with the income increases. Meanwhile, significant gap on public health service coverage are found, taking prenatal check-up for example, the rate of the urban lowest income group is 90%, urban highest income group is 100%, while the rural lowest income group is 75% and highest income group is 95%. The hospital delivery rate for the urban lowest

income group is 85%, urban highest income group is 98%, while the rural lowest income group is 45% and highest income group is 85%.

5. The total health expenditure increases constantly with no improvement in allocation and efficiency.

(1)Government investment in health institutions and total health expenditure increase, but the direction of such investment is not rational. Over the last five years, the government health expenditure increases constantly but with no significant increase in public health. The survey results show that the health expenditure of all regional and local level governments in 2002 increased 30% compared to 1997. Government health expenditure was mainly allocated to hospital, township hospital and traditional medicine hospitals, the total share in Government health expenditure dropped from 89.9% in 1997 to 88.4% in 2002, while in the meantime, the share of public health expenditure including disease prevention and control and maternal and child health only increased by less than 2% from 8.8% to 10.5%.

(2)China's health made great achievements and the size and number of medical institutions, human, material and financial resources increase dramatically. An average permanent asset of each hospital is 31,660,000 RMB in 2003 with an increase of 66% compared to 1998. Average permanent assets per bed is 150,189 RMB with an increase of 94% compared to 1998. CT number in hospitals increased from 3543 to 4760, IMR from 512 to 714, color ultrasonic increased from 4596 to 5926, Reno dialysis increased from 5390 to 7703, cardiac monitor increased from 27580 to 47024, delivery monitor increased from 3864 to 5316, X ray machine over 800MV or above increased from 2748 to 3093. The situation remains the same as of 80% of national, provincial and local government financial investment on health was allocated in the urban areas in which 80% was in the big urban hospitals as we have been always said in the past. While works like prevention, basic medical care and rural health that provide public goods and have great social benefit progress very slowly due to great financial restraints. Some efforts in these regards are unable to sustain.

(3).Irrational patient flow further encourages irrational health resource allocation. This survey shows that both urban and rural patients flowed to higher level hospitals and the situation of irrational use of medical services was not improved. Only 25.4% urban residences and 53.1% rural residences went to community or local health services or clinics. Compared with 1998 survey, the percentage of urban patients went to community health services reduced 1.4% and some cities the percentage dropped 6%, rural village clinic attendance rate reduced 7%. The percentages of rural patients flow to township and above hospitals and urban patients flow to big hospitals increased. Irrational patient flow on the one hand reduces the utilization rate of local health services and technical capacity, on the other hand led to the inefficient use of big hospital resources. Doctors in the big hospitals spent too

much time in dealing with common diseases which cause cost increase and long waiting time.

(4).Efficiency of overall medical service system decreased. The size of medical institutions increased steady recently, but the total service volume and efficiency of medical service system decreased. Nationwide the admission to medical institutions over the last five years constantly decreased and hospital admission fluctuated. Bed occupation rate in the general hospitals reduced from 88.2% in 1990 to 70.6%, in township hospital reduced from 40% to 36.3%. Doctor's daily workload in general hospital dropped from 5.5 consultations to 5.0, patient hospital admission day dropped from 2.1 to 1.5.

(5)Income level of medical service institutions increased significantly while the satisfaction rate of patients needs to improve. Although the efficiency of medical service hospitals decreased, the income increased. The total income of general hospitals in the country was 175 billion RMB in 2003 with an increase of 66.4% than 1998. The average out patient medical expense per person in general hospital was 108.2 RMB with an increase of 57.5% than 1998. The average hospital admission medical expense per person in general hospital was 3910.7 RMB with 391 RMB per bed per day-an increase of 76.1% than 1998. Residences were quite unsatisfied with the dramatic increase of medical expenses. The survey shows that 30% urban outpatient clients and 16% rural outpatient clients believed that the medical expenses for outpatient visits were too expensive and unreasonable. 34.4% urban and 10% rural hospital admission patients were dissatisfied with the high expenses. In addition to strong criticize on medical expenses, some patients also complained about the inconvenience of medical institutions and inconvenience of complain process and checking up of the bill, time from home to the medical institutions and inconvenience of getting there. They also were not satisfied with technical expertise level, equipments and environments of the medical institutions.

VI. Policy recommendations

The main findings of this survey show the problems and challenges in our national health system in the process of reform and development. It clearly shows that the problems and challenges in the economic transition period are substantially different from those in the planning economy. Major adjustment of the economic structure, change of market supply and demand, widened income gap among residences and diversity of health services pose new challenges to the old health care management and delivery system. Lagging health care management instruments, irrational health policy, profit driven of medical institutions and failure of market further enhance the conflicts between medical institutions and patients, supply and demand. The profound problem of health care system and mechanism stands out. Health reform and development is now challenged by the difficult choice of government planning and market. Only through reform and development means can we further study and solve the problems encountered in the process of reform and development and speed up the process in the end. According to the main findings of the survey, the following policy

issues needed to draw particular attention and be address properly.

1.How to define the responsibility of government and clarify the role and function of government in public health. With the economic transition and income increase in China, health service needs and demands become diversified with multilayer features. Government finance can not meet people's increased demands. On the meanwhile, the nature of public health services as providing public goods make it difficult for market to ensure access to public health benefits for the general public. Therefore, an important macro-policy is how to define the responsibility of government and market, and clarify the role of government in providing public health services. Government should at least play an active role to invest in public health interventions and basic medical care services, establish medical insurance scheme, reform health care system, promote diversity and competition, redefine its role enhance enforcement, regulate medical service market and behaviors.

2.How to reform and improve health care system to meet the increasing public health needs and demands from the general public. The survey shows that with the dramatic change of disease burden, health care system must adjust to meet such transition. Currently, many regions and areas have made some achievements through regional health allocation, reform, distribution of medical institutions and community health services. The key questions are to identify the driving force to initiate the effort in reforming our health care system to meet population health care need and how to establish clear incentive and restrictive mechanism to change the current irrational competition due to poor coordination and similarity in functions of various sources of medical institution so as to form a coordinative health care system with clear responsibility and better cooperation at all levels and among all kinds of such institutions. To solve these problems, priority should be given to speed up community health service delivery, further improve community health service policy, reform grassroots health service management and reduce the number of specialized medical institutions at this level, standardize service items of general hospital and specialized medical institutions, establish bi-referral mechanism with community health services, speed up the process of modernization of hospitals and explore effective measures for public hospital reform and attract resources from various channels to expand the financial input to medical care and promote competition in medical services.

3.How to reform and improve health policy development and ensure the sustainable and healthy development of medical care system. Current economic compensation method follows the suit of planning economics, such as medical institutions rely heavily on making profit from increasing the drug prices and service item fees, which is relevant under the planning economics where the doctor's income had nothing to do with the above mentioned practices. But in the the market economy, as the medical market is not free market, medical consumption of people is unpredicted, consumers have less information and decision making power which prevents them from playing an active role. The inherent nature of public welfare of

the medical services leaves very little room for normal market adjustment to play a role. When connected the compensation of medical staff income with the actual service behaviors, these policy not only unable to overcome the shortcomings of the market failure but also become means for some hospitals and medical staff to increase extra medical service demands. Driven by the opportunity cost profit, doctors in hospitals are keen to prescribe big prescriptions with expensive imported drugs, compete to buy high-technological medical equipments to make extra profit. All of these above mentioned phenomena further worsen the market failure. The main underlying reason for constantly increase of medical expenses, distorted medical service behavior, degradation of morals and strong resistance from the society. If we can not solve these problems, the health reform will go into dead-end. Currently there are many heated debates on how to reform health economic policy and it is a very difficult issue to address. Our recommendations is to further carefully study the irrational nature of current health economic policy and lay foundation for development of new medical compensation and pricing policy speed up the pilot of “three decrease and one increase, scale up reform on health economic policy, actively explore methods based on different type of diseases in conjunction with multi-means of payment schemes, increase government financial input to public health and reduce the numbers of out of pocket service items.

4. How can rural health development be quickened to narrow the gap in healthcare services between urban and rural areas? Governments at all levels increased investment into rural health development in the recent years, and through the “Three Constructions Campaign”, the infrastructure of rural health system has been greatly improved. Through transfer payment from the state finance, the disease control agencies, blood collection and supply agencies and some township hospitals in the rural areas of mid-west China have been enhanced and improved. The new Cooperative Medical System is being experimented and will be gradually introduced to other areas to reduce the health risk to farmers and the financial burden of medical care. However the development of rural health is still lagging behind our expectation. In addition to increasing the government’s transfer payment and improving the infrastructure of rural health system, health manpower is also critical for the successful development of rural health. In October 2002, CPC Central Committee and the State Council issued the document *the Decision on Strengthening Rural Health Work*, in which the guidelines and goals of rural health work were clearly stated and the important decision of building up rural healthcare system and a new Cooperative Medical System was made. This document will be a milestone of rural health development in the new era. Therefore, in line with the policy focusing on rural health, the infrastructure of rural health should be improved. The new Cooperative Medical System should be steadily developed while other types of medical insurance be explored and tested. A training system for rural health professionals should be set up to speed up the production of rural health manpower. The policy of urban facilities supporting their rural counterparts should be quickly put into effect. An effective mechanism for the management and internal operation of rural health facilities should

be set up and improved.

5. How can the social awareness of health be improved, healthy behaviors be promoted and passive prevention be turned into active and comprehensive prevention? Through extensive health promotion and health education campaigns, the general public can improve their healthy behaviors. Comprehensive preventive measures can be taken to actively prevent the occurrence of chronic non-communicable diseases so as to improve the health status of the general public. Primary prevention should be emphasized and multiple sectors including sectors of disease prevention, medical care and community health care should be involved in the action. Different approaches should be used to promote health behaviors and change the concepts and behaviors of the population regarding health and the utilization of health services, so as to improve the effectiveness and safety of health services. The responsibility of the government in public health and in the control and prevention of significant communicable diseases should be well defined, so that the significant communicable diseases can be controlled and prevented and their impact on health and social and economic development can be minimized. All sectors in the whole society should be mobilized through the coordination of government so as to timely detect and report any cases of major infectious diseases. Preparedness plan for controlling and preventing infectious diseases should be formulated to prevent the outbreaks of major communicable diseases by taking specific and effective measures in different stages throughout the process of infection, transmission and treatment of the disease. Problems and weaknesses in public health such as EPI and maternal and child healthcare should be identified timely. The role and responsibilities of governments at various levels in public health should be clarified and strengthened, and the coverage of basic services of public health should be expanded and the quality of services improved by focusing on some key areas.